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ABSTRACT

The study shows how data obtained in the National Longitudinal Study of the High School Class of 1972 has been used to answer some questions about the federal strategy for awarding financial aid. The questions considered are: (1) What expectations did the senior class of 1972 planning to enter postsecondary education have about how they would meet the costs, and do the expectations vary systematically with such factors as sex, race, family income, and ability level?; (2) How realistic were these expectations, as evidenced by later experience?; (3) How was aid distributed among subgroups of students defined by sex, race, family income, ability level, and type of postsecondary institution attended?; (4) Did the family contribution vary by the cost of the institution or by the aid received?; (5) To what extent has direct financial aid equalized the net college price to student from various family income levels?; and (6) To what extent is direct aid related to persistence in postsecondary education over time? Some data tables and charts are included. (MSE)

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# Impact of Financial Aid on Postsecondary Entrance and Persistence

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## Impact of Financial Aid on Postsecondary Entrance and Persistence

### I. PURPOSE

It is perhaps belaboring the obvious to state that level of family income is related to college-going, a fact borne out sharply by the data from the first follow-up in the National Longitudinal Study of the High School Class of 1972. Figure 1, taken from the 1975 Condition of Education report[1/] of the National Center for Education Statistics, shows the proportions of individuals in the various family income categories who entered each of three major forms of postsecondary education. Neither is it surprising that differences in college-going as a function of family income is most obvious where four-year institutions (as opposed to two-year or to trade and proprietary schools) are concerned.

Many diverse factors may support this phenomenon. Postsecondary education not only requires payment of all or a portion of its costs by the individual and his family, but also involves delayed or modified entry into the labor market and a consequent reduction in immediate income. Aside from the matter of being able to afford college, family income is known to be related to such factors as scholastic ability of children (in turn related to entry into postsecondary education), expectation of parents that children will attend college, or to the realism of aspiring to a particular vocation for which college is a normal means of entry.

It is also belaboring the obvious to state that the overriding purpose of current Office of Education programs is to enhance educational opportunity (or, more specifically, to reduce inequalities in education opportunity), and that the principal federal strategy in pursuit of this goal is to provide funds directly and indirectly to students as a function of financial need. Financial aid, once principally a prize for outstanding academic promise, has become in principle a potential leveler of ability-to-pay for a college education.

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1/ National Center for Education Statistics. The Condition of Education: A Statistical Report on the Condition of American Education, 1975. Washington: U.S. Government Printing Office, 1975.

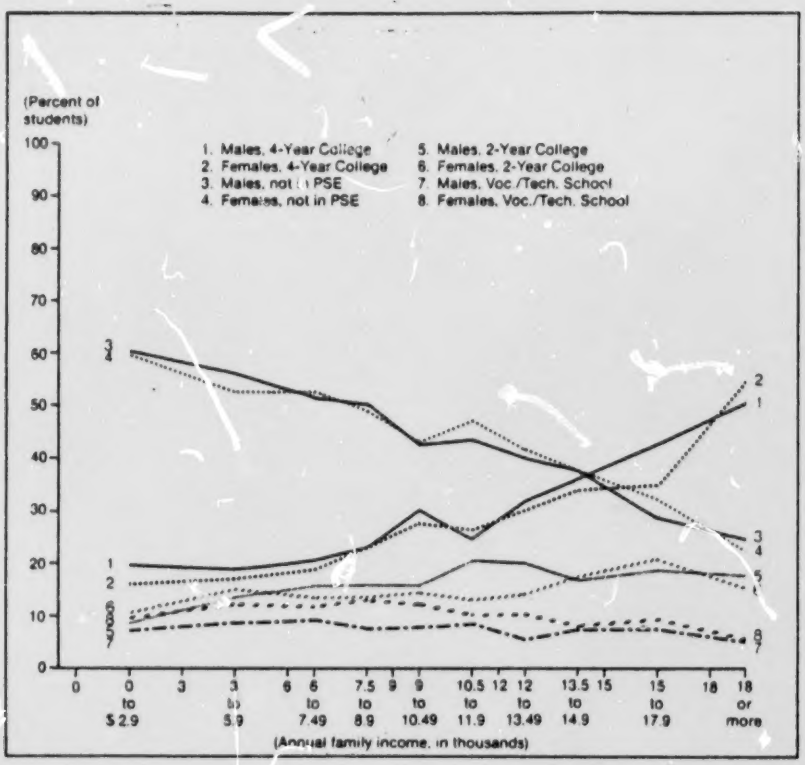


Figure 1. Entry into Postsecondary Education, by Type of Institution, Family Income, and Sex, for High School Class of 1972, October 1972.

Source: NCES. The Condition of Education Report for 1975, Washington: U.S. Government Printing Office, 1975, p. 106.

For example, of the total USOE higher education budget of $2.5 billion in fiscal year 1975, 36.5 percent was invested in non-returnable grant programs (Basic Educational Opporunity Grants, Supplementary Educational Opportunity Grants, and State Student Incentive Grants). Self-help programs (College Work Study, National Direct Student Loans, the Cooperative Education Program, and Guaranteed Student Loans) accounted for an additional 52.3 percent.

The purpose of this paper is to show how the NLS data, with particular emphasis on the base year and first follow-up information, has been used to answer some of the most obvious questions relevant to the current federal strategy. These may be summarized as follows:

a) What expectations did the high school senior class in 1972 planning to enter postsecondary education (PSE) have as to how they would meet the costs? Do these expectations vary systematically with such factors as sex, race, family income, and ability level?

b) How realistic were these expectations, as borne out by later experience?

c) Who received aid? In particular, how was aid distributed among subgroups of students defined by sex, race, family income, ability level, and type of postsecondary institution attended?

d) Did the amount of money contributed by the family to support the individual in PSE vary by the cost of college or the amount of aid then received?

e) Defining "net price" as the difference between expenses and the sum of family contributions and direct aid: To what extent has direct aid equalized net price to students from various family income levels?

f) To what extent is direct aid related to persistence over time in postsecondary education?

B. Aid Expectations of High School Seniors in 1972

Of those high school seniors in the NLS sample planning postsecondary education in 1972, about two-thirds (65.1 percent) anticipated receiving some form of student aid; about four out of ten (or 40.5 percent) of all seniors planning to continue their schooling anticipated federal aid as all or part of this component of their subsequent educational costs.

Expectation of aid from any source varies markedly as a function of family income. Table 1 presents the proportions of seniors of various

Table 1

PERCENTAGE OF SENIORS PLANNING POSTSECONDARY EDUCATION WHO ARE ALSO PLANNING TO USE FINANCIAL AID, BY TYPE OF AID AND BY FAMILY INCOME LEVEL: SPRING 1972

| Source and Type of Aid | Family Income Level | | | | |
|---|---|---|---|---|---|
| | Less than $6,000 | $6,000 to $8,999 | $9,000 to $11,000 | $12,000 to $14,999 | $15,000 and over |
| Federal or Non-Federal Aid | 82.9 | 77.8 | 72.6 | 65.8 | 49.8 |
| Non-Federal Aid | 65.6 | 64.2 | 61.7 | 57.6 | 41.9 |
| Federal Aid | 69.0 | 53.5 | 44.6 | 36.9 | 25.9 |
| Federal Scholarships or Grants | 30.2 | 18.6 | 13.5 | 10.8 | 6.9 |
| Federal Loans | 29.0 | 26.7 | 22.2 | 16.7 | 10.4 |
| College Work-Study Programs | 37.3 | 28.3 | 24.2 | 20.2 | 14.3 |
| Other Federal Programs | 30.4 | 16.0 | 9.3 | 6.2 | 4.2 |
| Total N (unweighted) | 1252 | 1429 | 1600 | 1250 | 2125 |

income levels planning PSE and anticipating (1) any aid or (2) other particular kinds of aid, including federal aid alone. Note, for example, that while about seven out of ten with family incomes of less than $6,000 per year anticipate federal aid, one out of four in the $15,000 and over family income bracket anticipate this particular kind of assistance from this source.

Expectations of aid also appears to be a function of racial/ethnic group (which is surely explained partially by differences in family income among these groups). The minority groups, for example, are more likely to count, in particular, on federal aid than are whites (Table 2).

Differences are not so marked when seniors planning PSE are sorted into three groups (lowest quartile, middle half, and highest quartile) on a measure of general academic ability[2/] derived from scores on four cognitive tests administered in the base year (Table 2). For federal aid, almost five out of ten in the lowest ability quartile anticipate federal aid, as do about four out of ten in the highest ability quartile. About seven out of ten in both the high and low quartiles anticipate some form of student assistance.

No differences of practical significance were noted as a function of sex.

C. Fulfillment of Expectations for Aid

One set of analyses conducted by researchers at RTI has explored the proportions of those 1972 high school seniors anticipating aid who entered a postsecondary institution and, upon the first follow-up, reported receiving aid in 1972-73.

These data are somewhat confounded by the fact that various (and sometimes overlapping) categories of aid were used to inquire about expectations and fulfillment. However, of those stating an expectation of federal aid, 38 percent reported federal aid, 29 percent reported non-federal aid, and 49 percent reported either federal or non-federal aid, or both.

The data (Table 3) show that females were more likely to fulfill their plans for aid than males. Also, blacks and Spanish-Americans appear more likely than whites to fulfill their plans for federal aid, while whites are slightly more likely to fulfill plans for non-federal aid. The most striking differences in fulfillment of aid expectations, however, occur as a function of ability:

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2/ Of six tests administered in the base year, researchers at RTI after factor analytic study formed an equally weighted linear composite from the vocabulary, reading, letter group, and mathematics tests.

Table 2

PERCENTAGE OF SENIORS PLANNING POSTSECONDARY EDUCATION WHO ARE ALSO PLANNING TO USE FINANCIAL AID, BY TYPE OF AID AND BY SELECTED STUDENT SUBPOPULATION GROUPS: SPRING 1972

| Source and Type of Aid | Total | Sex | | Race | | | Ability | | | H. S. Program | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Male | Female | Black | White | Spa. American | High | Medium | Low | General | Academic | Voc/ Tech |
| Federal or Non-Federal Aid | 65.2 | 66.1 | 64.0 | 84.9 | 63.0 | 70.8 | 69.4 | 60.1 | 69.7 | 59.4 | 67.5 | 62.9 |
| Non-Federal Aid | 54.4 | 55.2 | 53.7 | 70.4 | 52.8 | 56.9 | 61.3 | 49.1 | 53.8 | 45.6 | 58.7 | 49.2 |
| Federal Aid | 40.5 | 40.4 | 40.7 | 66.2 | 37.4 | 56.3 | 42.1 | 37.1 | 47.5 | 37.5 | 41.6 | 41.0 |
| Federal Scholarships or Grants | 13.1 | 13.0 | 13.1 | 33.0 | 10.5 | 31.7 | 11.2 | 12.2 | 19.9 | 12.4 | 13.2 | 13.9 |
| Federal Loans | 16.1 | 16.4 | 19.8 | 35.8 | 16.0 | 25.0 | 21.5 | 15.1 | 19.6 | 14.0 | 19.8 | 17.4 |
| College Work-Study Programs | 22.0 | 21.3 | 22.6 | 38.2 | 20.0 | 32.3 | 24.8 | 19.1 | 23.4 | 18.3 | 23.8 | 19.6 |
| Other Federal Programs | 10.7 | 11.0 | 10.5 | 18.3 | 9.8 | 14.7 | 8.2 | 10.1 | 18.6 | 13.1 | 8.9 | 15.9 |
| Total N (unweighted) | 9556 | 4676 | 4872 | 1135 | 7488 | 384 | 3330 | 4092 | 1656 | 2553 | 5630 | 1373 |

*See Table A-1, Appendix A, for breakdown by family income level.

Table 3

FULFILLMENT OF FINANCIAL AID PLANS
FOR THE TOTAL GROUP AND FOR STUDENT SUBGROUPS

| Source and Type of Aid Planned for in Spring 1972 | Source/Type of Aid Received in 1972-73 Academic Year | | | Total N (unweighted) |
|---|---|---|---|---|
| | Federal or Non-Federal Aid | Non-Federal Aid | Federal Aid | |
| **Total Group** | | | | |
| Federal or Non-Fedreral Aid | 44.9 | 29.2 | 27.9 | 6300 |
| Non-Federal Aid | 46.7 | 33.3 | 27.3 | 5201 |
| Federal Aid | 49.4 | 29.2 | 38.1 | 4233 |
| **SEX:** | | | | |
| **Males** | | | | |
| Federal or Non-Federal Aid | 41.8 | 26.6 | 24.8 | 3117 |
| Non-Federal Aid | 43.7 | 30.7 | 24.3 | 2589 |
| Federal Aid | 45.2 | 25.3 | 32.6 | 1936 |
| **Females** | | | | |
| Federal or Non-Federal Aid | 48.0 | 31.8 | 31.0 | 3177 |
| Non-Federal Aid | 49.7 | 35.9 | 30.4 | 2607 |
| Federal Aid | 53.5 | 33.0 | 40.8 | 2093 |
| **RACE:** | | | | |
| **Black** | | | | |
| Federal or Non-Federal Aid | 41.6 | 19.8 | 35.6 | 952 |
| Non-Federal Aid | 43.3 | 22.3 | 36.5 | 775 |
| Federal Aid | 44.3 | 20.2 | 39.3 | 745 |
| **White** | | | | |
| Federal or Non-Federal Aid | 45.3 | 30.5 | 26.6 | 4695 |
| Non-Federal Aid | 47.1 | 34.8 | 25.9 | 3893 |
| Federal Aid | 50.3 | 30.6 | 36.4 | 2815 |
| **Spanish-American** | | | | |
| Federal or Non-Federal Aid | 43.4 | 22.8 | 35.2 | 284 |
| Non-Federal Aid | 45.0 | 25.0 | 36.3 | 224 |
| Federal Aid | 47.6 | 25.5 | 39.4 | 229 |
| **ABILITY:** | | | | |
| **High Ability** | | | | |
| Federal or Non-Federal Aid | 54.3 | 41.3 | 30.6 | 2286 |
| Non-Federal Aid | 56.2 | 45.1 | 30.5 | 2020 |
| Federal Aid | 60.6 | 43.5 | 42.3 | 1393 |
| **Medium Ability** | | | | |
| Federal or Non-Federal Aid | 41.6 | 23.1 | 27.6 | 2511 |
| Non-Federal Aid | 42.6 | 26.6 | 26.5 | 2033 |
| Federal Aid | 45.9 | 21.9 | 35.8 | 1589 |
| **Low Ability** | | | | |
| Federal or Non-Federal Aid | 27.9 | 11.9 | 20.8 | 1187 |
| Non-Federal Aid | 28.3 | 13.9 | 19.8 | 897 |
| Federal Aid | 31.7 | 12.5 | 23.1 | 843 |

the more able are likely to get aid, a finding no doubt influenced by the fact that the more able are more likely to enter PSE and thus become eligible for aid.

D. Characteristics of Aid Recipients

About 29 percent of all NLS respondents attended four-year institutions immediately after graduation from high school, 14 percent attended two-year colleges, and another 10 percent enrolled in vocational and technical schools (Peng[3/]). Of those entering PSE, 36 percent reported receiving some kind of aid (either federal or non-federal, or both) (Table 4), and 23 percent of those enrolled in PSE reported receiving some sort of federal aid.

When students are considered according to the kinds of PSE institution in which they were enrolled, higher proportions of those in four-year colleges report aid (27 percent report federal aid, 44 percent some type of aid) than do those in vocational/technical schools (22 percent federal aid, 31 percent some type of aid) or those in two-year colleges (16 percent federal aid, 27 percent some type of aid).

Figure 2 (from the Condition of Education report[4/]) shows how the proportions in the federal aid categories vary by family income. Proportions receiving federal aid tend to decrease as family income categories become progressively higher. This trend is sharper for federal aid than for all aid (data not shown here); almost one of every two students from families with reported incomes below $3,000 report receiving federal aid, as do less than one of ten in the over $18,000 income range. The sharpest trend occurs for federal aid recipients in four-year institutions: here, two-thirds of those in the below $3,000 income level who are enrolled in four-year institutions report federal aid, while less than one of ten of those students in the over $18,000 income category report federal aid.

Figure 3, drawn also from the Condition of Education report[5/], shows the trends graphically for federal vs. non-federal aid. It shows rather sharply the divergence, in the expected direction, between federal and non-federal aid at the lower income levels.

Of other characteristics: slightly higher proportions of females appear from the data to receive aid (Table 5). Minorities as a group report receiving aid much more frequently than do whites, no matter what the type of postsecondary institution (Table 6). There is a slight

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3/ Peng, S. S. Some Trends in Entry to Higher Education. Educational Researcher. January 1977.

4/ NCES, op. cit.

5/ Ibid.

Table 4

PERCENTAGE OF STUDENTS ENROLLED IN POSTSECONDARY EDUCATION RECEIVING FINANCIAL AID, BY TYPE OF AID AND TYPE OF SCHOOL: 1972-73

| Source and Type of Aid | Total | Type of School | | |
|---|---|---|---|---|
| | | Voc/Tech | 2-Year College | 4-Year College |
| Federal or Non-Federal Aid | 36.2 | 30.7 | 27.3 | 43.8 |
| Non-Federal Aid | 22.9 | 11.6 | 15.6 | 30.3 |
| Federal Aid | 22.6 | 21.9 | 16.0 | 27.3 |
| Federal Scholarships or Grants | 6.6 | 3.6 | 4.8 | 8.6 |
| Federal Loans | 12.6 | 13.1 | 4.5 | 17.3 |
| College Work-Study Programs | 6.7 | 3.0 | 6.1 | 8.4 |
| Other Federal Programs | 4.6 | 5.0 | 5.4 | 4.3 |
| Savings or Earnings | 53.8 | 40.3 | 54.2 | 59.4 |
| Family Support | 59.4 | ,47.4 | 54.2 | 68.1 |
| Total N (unweighted) | 11421 | 1559 | 3047 | 6128 |

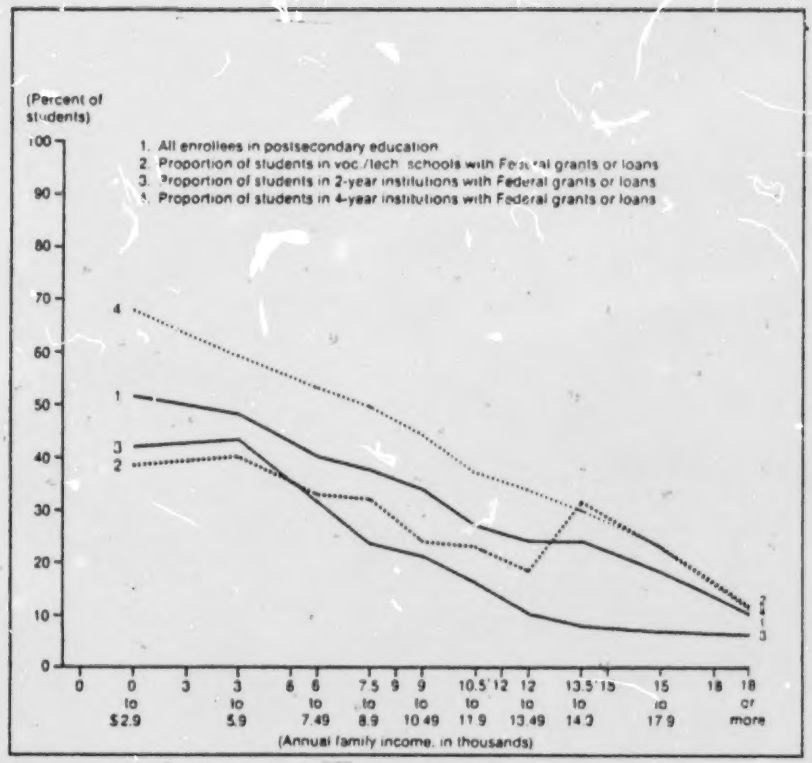


Figure 2. Participation in Federal Financial Aid Programs, by Type of Institution and Family Income, for High School Class of 1972: 1972-73.

Source: NCES. The Condition of Education Report for 1975. Washington: U.S. Government Printing Office, 1975, p. 94.

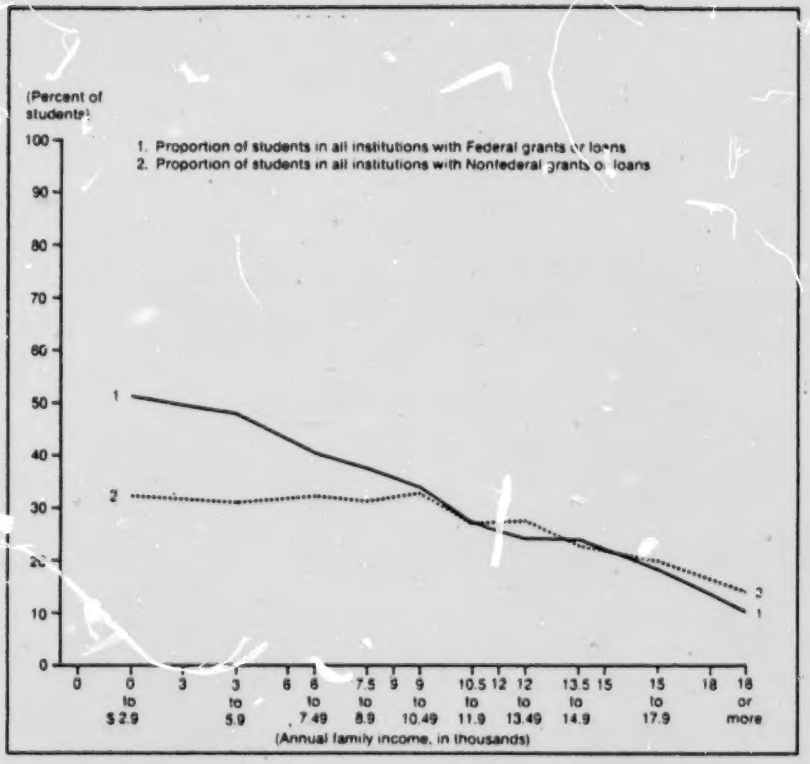


Figure 3. Participation in Federal Versus Non-Federal Financial Aid Programs, by Family Income, for High School Class of 1972: 1972-73.

Source: NCES. The Condition of Education Report for 1975. Washington: U.S. Government Printing Office, 1975, p. 94.

Table 5

PERCENTAGE OF STUDENTS ENROLLED IN POSTSECONDARY EDUCATION RECEIVING EACH TYPE OF FINANCIAL AID, BY TYPE OF SCHOOL AND SEX: 1972-73

| Source and Type of Aid | Total | | Voc/Tech | | 2-Year College | | 4-Year College | |
|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female | Male | Female |
| Federal or Non-Federal Aid | 33.9 | 38.7 | 27.5 | 32.7 | 25.6 | 29.2 | 41.3 | 46.6 |
| Non-Federal Aid | 21.0 | 24.8 | 9.1 | 13.3 | 14.0 | 17.4 | 28.0 | 32.9 |
| Federal Aid | 20.6 | 24.7 | 20.5 | 22.8 | 14.9 | 17.2 | 24.7 | 30.2 |
| Federal Scholarships or Grants | 6.0 | 7.3 | 2.6 | 4.2 | 4.3 | 5.4 | 7.8 | 9.6 |
| Federal Loans | 11.4 | 13.9 | 11.8 | 14.0 | 3.9 | 5.2 | 15.7 | 19.0 |
| College Work-Study Programs | 5.6 | 7.9 | 3.3 | 2.9 | 5.1 | 7.3 | 6.7 | 10.3 |
| Other Federal Programs | 4.3 | 5.0 | 5.5 | 4.6 | 5.8 | 5.1 | 3.7 | 5.1 |
| Savings or Earnings | 59.7 | 47.9 | 48.4 | 35.1 | 61.0 | 46.9 | 64.0 | 54.3 |
| Family Support | 55.7 | 63.3 | 38.4 | 53.2 | 49.1 | 59.7 | 65.3 | 70.9 |
| Total N (unweighted) | 5640 | 5758 | 610 | 948 | 1567 | 1472 | 3116 | 3003 |

Table 6

PERCENTAGE OF STUDENTS ENROLLED IN POSTSECONDARY EDUCATION RECEIVING EACH TYPE OF FINANCIAL AID, BY TYPE OF SCHOOL AND RACE: 1972-73

| Source and Type of Aid | Total | | | Voc/Tech | | | 2-Year College | | | 4-Year College | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Black | White | Spanish American | Black | White | Spanish American | Black | White | Spanish American | Black | White | Spanish American |
| Federal or Non-Federal Aid | 48.7 | 35.1 | 44.2 | 34.2 | 30.0 | 46.3 | 36.1 | 26.5 | 32.1 | 63.3 | 41.7 | 67.0 |
| Non-Federal Aid | 22.6 | 23.1 | 23.2 | 5.6 | 12.4 | 16.9 | 11.2 | 16.0 | 17.5 | 34.3 | 29.9 | 37.9 |
| Federal Aid | 41.2 | 20.6 | 34.9 | 28.4 | 20.9 | 30.9 | 29.2 | 14.4 | 24.5 | 54.3 | 24.4 | 56.8 |
| Federal Scholarships or Grants | 17.8 | 5.1 | 17.2 | 3.1 | 3.5 | 5.0 | 12.6 | 4.1 | 7.7 | 26.4 | 6.3 | 36.8 |
| Federal Loans | 22.7 | 11.6 | 17.2 | 20.6 | 11.5 | 28.3 | 8.0 | 4.2 | 3.5 | 31.8 | 15.8 | 32.9 |
| College Work-Study Programs | 16.9 | 5.7 | 10.6 | 5.6 | 2.8 | 0.0 | 13.4 | 5.0 | 11.6 | 23.9 | 7.0 | 16.6 |
| Other Federal Programs | 5.0 | 4.7 | 3.5 | 3.5 | 5.3 | 0.0 | 8.9 | 5.4 | 4.8 | 4.6 | 4.4 | 4.3 |
| Savings or Earnings | 32.8 | 56.8 | 42.2 | 24.0 | 43.3 | 30.0 | 37.8 | 56.3 | 46.6 | 36.1 | 62.2 | 47.0 |
| Family Support | 45.4 | 62.0 | 41.2 | 32.9 | 51.4 | 29.6 | 45.0 | 55.6 | 46.3 | 53.4 | 70.3 | 45.2 |
| Total N (unweighted) | 1303 | 8444 | 398 | 241 | 1114 | 50 | 298 | 2196 | 170 | 651 | 4679 | 141 |

tendency for higher proportions of students in the highest ability quartile to report federal aid than students in the middle half or the lowest quartiles of the ability distribution (Table 7).

E. Impact of Aid on Amount of Family Contribution to PSE Costs and to "Net Price" for the Student, in Relation to Level of Family Income

In the previous sections, we have been concerned with participation rates for students of various kinds in PSE, with particular attention to characteristics of those receiving aid. While such rates describe important features of the context in which student aid programs operate, they reflect a multiplicity of factors beyond and in addition to whatever equalizing effect the availability of aid has. For example, the data reveal that aid goes more frequently to the lower income groups, to the racial minorities, and to students in four-year institutions; yet, what is the residual burden on the student and/or on his family, and what does this imply with regard to the equalization of educational opportunity?

The first follow-up questionnaire utilized in the National Longitudinal Study asked students in PSE institutions to report their educational costs, and to account for how these costs were paid. Thus, students can be subdivided according to the levels of total PSE expenses; and, the amounts of aid, family contributions, work income and savings, etc. that go to pay these expenses can be identified.

In this section, we shall focus on total costs, family contributions, grant aid; and "net price," which is the difference between total expenses and the sum of family contributions and grant aid. To the extent that net price is equalized across the range of family income levels, one may assume financial barriers have been equalized.

Table 8 shows, for six categories of expense level, and for students from the several family income categories, the mean net price, family contribution, grant aid, and total cost. These data compiled by the Office of Planning, Budgeting, and Evaluation of the Office of Education, show remarkably little variation across income classes in the actual net prices paid by full-time postsecondary students for most of the different expense levels. This is an important finding given the availability of aid and the diversity of distribution methods used for these programs. For example, of the federal student grant programs, only the Basic Grant Program distributes aid directly to the student on the basis of need alone. Other programs such as Supplemental

Table 7

PERCENTAGE OF STUDENTS ENROLLED IN POSTSECONDARY EDUCATION RECEIVING EACH TYPE OF FINANCIAL AID, BY ABILITY AND RACE: 1972-73

| Source and Type of Aid | High Ability | | | Medium Ability | | | Low Ability | | |
|---|---|---|---|---|---|---|---|---|---|
| | Black | White | Spanish-American | Black | White | Spanish-American | Black | White | Spanish-American |
| Federal or Non-Federal Aid | 50.0 | 42.1 | 59.3 | 57.8 | 30.8 | 47.2 | 40.4 | 23.2 | 39.5 |
| Non-Federal Aid | 31.6 | 31.8 | 36.7 | 29.1 | 17.0 | 26.5 | 13.2 | 9.4 | 18.6 |
| Federal Aid | 43.4 | 23.1 | 38.7 | 49.4 | 19.0 | 36.1 | 34.4 | 15.8 | 32.8 |
| Federal Scholarships or Grants | 14.1 | 6.4 | 24.7 | 20.2 | 4.3 | 19.1 | 15.7 | 3.5 | 12.0 |
| Federal Loans | 34.2 | 14.5 | 29.8 | 37.4 | 10.1 | 18.5 | 17.4 | 6.2 | 14.0 |
| College Work-Study Programs | 14.9 | 7.0 | 26.7 | 22.1 | 5.0 | 7.9 | 12.9 | 3.8 | 12.4 |
| Other Federal Programs | 5.9 | 3.9 | 5.7 | 5.6 | 4.7 | 3.9 | 4.7 | 6.4 | 3.5 |
| Savings or Earnings | 56.0 | 64.4 | 69.4 | 41.0 | 55.5 | 45.4 | 30.9 | 40.3 | 36.4 |
| Family Support | 62.1 | 69.8 | 55.4 | 53.1 | 60.2 | 54.8 | 39.3 | 44.2 | 33.5 |
| Total N (unweighted) | 55 | 2835 | 22 | 325 | 2913 | 127 | 486 | 652 | 150 |

Table 8

DISTRIBUTION OF 1972 HIGH SCHOOL SENIORS IN STUDY ACTIVITIES IN OCTOBER 1973 BY FAMILY INCOME AND TOTAL EDUCATIONAL EXPENSE

| Ranges of Total Costs | (1) 0-2,999 | (2) 3,000-5,999 | (3) 6,000-7,499 | (4) 7,500-8,999 | (5) 9,000-10,499 | (6) 10,500-11,999 | (7) 0-11,999 | (8) 12,000-13,499 | (9) 13,500-14,999 | (10) 15,000-17,999 | (11) 18,000 or more | (12) 12,000 or more | (13) Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Ranges of Family Income | | | | | | | | |
| $0-1,500 | | | | | | | | | | | | | |
| Net Price | 203 | 208 | 149 | 210 | 202 | 187 | 193 | 154 | 186 | 160 | 122 | 149 | 173 |
| Contribution | 835 | 874 | 940 | 905 | 938 | 952 | 913 | 1,020 | 968 | 1,027 | 1,071 | 1,031 | 966 |
| Grants | 115 | 93 | 65 | 50 | 51 | 47 | a/ | 29 | 40 | 19 | 23 | 26 | 48 |
| Total Cost | 1,154 | 1,177 | 1,155 | 1,166 | 1,191 | 1,183 | 1,174 | 1,205 | 1,194 | 1,207 | 1,217 | 1,208 | 1,189 |
| $1,501-2,000 | | | | | | | | | | | | | |
| Net Price | 536 | 556 | 494 | 508 | 554 | 419 | 510 | 495 | 427 | 403 | 326 | 399 | 460 |
| Contribution | 792 | 896 | 1,012 | 1,044 | 1,082 | 1,192 | 967 | 1,330 | 1,222 | 1,393 | 1,424 | 1,283 | 1,151 |
| Grants | 485 | 320 | 249 | 242 | 138 | 188 | 241 | 146 | 114 | 93 | 57 | 95 | 175 |
| Total Cost | 1,814 | 1,773 | 1,756 | 1,794 | 1,775 | 1,799 | 1,782 | 1,779 | 1,764 | 1,789 | 1,808 | 1,789 | 1,786 |
| $2,001-2,500 | | | | | | | | | | | | | |
| Net Price | 724 | 888 | 826 | 820 | 706 | 730 | 778 | 684 | 607 | 635 | 543 | 625 | 712 |
| Contribution | 744 | 778 | 962 | 1,046 | 1,266 | 1,214 | 1,041 | 1,371 | 1,314 | 1,462 | 1,616 | 1,478 | 1,253 |
| Grants | 777 | 600 | 472 | 390 | 277 | 325 | 435 | 210 | 144 | 174 | 118 | 152 | 299 |
| Total Cost | 2,245 | 2,268 | 2,260 | 2,256 | 2,250 | 2,271 | 2,256 | 2,267 | 2,266 | 2,272 | 2,277 | 2,270 | 2,265 |
| $2,501-3,000 | | | | | | | | | | | | | |
| Net Price | 990 | 954 | 1,030 | 885 | 925 | 978 | 957 | 808 | 819 | 853 | 620 | 739 | 847 |
| Contribution | 788 | 1,047 | 1,079 | 1,303 | 1,320 | 1,413 | 1,204 | 1,567 | 1,660 | 1,666 | 2,079 | 1,821 | 1,511 |
| Grants | 1,012 | 757 | 651 | 564 | 498 | 398 | 664 | 407 | 345 | 240 | 115 | 240 | 422 |
| Total Cost | 2,791 | 2,760 | 2,761 | 2,753 | 2,744 | 2,791 | 2,767 | 2,783 | 2,825 | 2,760 | 2,815 | 2,802 | 2,782 |
| $3,001-4,000 | | | | | | | | | | | | | |
| Net Price | 1,142 | 1,106 | 1,144 | 1,429 | 1,351 | 1,167 | 1,231 | 1,150 | 1,210 | 1,006 | 552 | 807 | 986 |
| Contribution | 810 | 765 | 1,344 | 1,206 | 1,482 | 1,708 | 1,277 | 2,709 | 1,851 | 2,191 | 2,725 | 2,334 | 1,798 |
| Grants | 1,478 | 1,586 | 966 | 832 | 635 | 588 | 948 | 640 | 442 | 302 | 275 | 363 | 575 |
| Total Cost | 3,443 | 3,458 | 3,451 | 3,468 | 3,469 | 3,463 | 3,457 | 3,499 | 3,504 | 3,501 | 3,554 | 3,528 | 3,273 |
| $4,001-9,900 | | | | | | | | | | | | | |
| Net Price | 1,798 | 2,010 | 1,830 | 1,488 | 1,913 | 1,798 | 1,813 | 1,424 | 1,739 | 1,123 | 765 | 980 | 1,237 |
| Contribution | 1,231 | 1,142 | 2,271 | 1,744 | 1,477 | 1,875 | 1,663 | 2,336 | 2,117 | 3,165 | 4,156 | 3,603 | 3,011 |
| Grants | 2,016 | 2,194 | 1,094 | 1,631 | 1,744 | 952 | 1,563 | 1,068 | 1,127 | 671 | 239 | 482 | 814 |
| Total Cost | 5,036 | 5,347 | 5,196 | 4,865 | 5,135 | 4,626 | 5,040 | 4,829 | 4,984 | 4,960 | 5,162 | 5,066 | 5,063 |
| All Costs | | | | | | | | | | | | | |
| Net Price | 611 | 701 | 689 | 683 | 709 | 645 | 680 | 608 | 689 | 597 | 472 | 599 | 620 |
| Contribution | 812 | 882 | 1,109 | 1,096 | 1,176 | 1,257 | 1,084 | 1,344 | 1,374 | 1,443 | 2,176 | 1,774 | 1,428 |
| Grants | 429 | 606 | 427 | 400 | 346 | 290 | 429 | 277 | 239 | 204 | 135 | 194 | 311 |
| Total Cost | 2,044 | 2,189 | 2,227 | 2,179 | 2,233 | 2,193 | 2,192 | 2,231 | 2,303 | 2,445 | 2,784 | 2,528 | 2,360 |

Source: National Longitudinal Survey of the High School Class of 1972.

Grants (SEOG) are awarded through the institution or, like the Veterans Educational Benefits, are awarded directly to the student on a non-need basis. Furthermore, those states which have grant programs, and those private agencies which award grants, use a variety of distribution methods, some of which are only loosely related in need.

This relative equality is especially apparent up to an annual family income level of $12,000. (Most Office of Education sponsored aid is targeted on students at this family income level or below). Although this relative equality is somewhat more apparent at the lower than at the higher expense levels, it is nonetheless true that out of 36 income/expense categoreis covered only three or four appear to be significantly different from the mean for the particular cost level and the less-than-$12,000 income group. This can be seen by comparing the net prices paid by students in a particular income/expense category (Columns 1-6) to their weighted means (Column 7).[6/]

Remembering that net price equals expenses minus the sum of family contributions and grant aid, the reason for the consistency of net-price is obvious--family contributions are directly related to family income and grant aid is inversely related to income. These relations generally hold for all expense levels.

While net prices tend to be equalized, given equal expenses for students from families in the less-than-$12,000 income group, there are still substantial differences between the lower (less-than-$12,000) and higher ($12,000-or-greater) income groups. These differences can be easily observed by comparing the net prices in Column 7 with those in Column 12. As can be seen, the differences are substantial at the higher expense levels. The decline in net price that occurs within the $12,000-or-greater income level (averaging 22 percent) and between the less-than-$12,000 and the $12,000-or-greater income level (averaging 41 percent) is principally a result of the fact that the rise in family contribution with income is not offset by a corresponding rise in grant aid at the lower income levels.

It can also be seen from Table 8 that family preferences are also at work. Given the same icome levels it is noted that the family contribution increases as students attend higher cost institutions. While not identified as such, students in institutions beyond the $2,000 to $2,500 cost range, by

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6/ The same General results occurred when the analysis was repeated using the UCLA/CIRP Survey of Freshmen for the Fall of 1975. This information will be available in the FY 1976 Annual Evaluation Report of the Office of Education.

and large, attend private institutions. Within the income groups, students attending higher cost institutions have higher family contributions, as well as increased grant levels, the total of which was not great enough to offset the increase in total costs. Thus the net price students ended up having to pay increased as total costs rose. Clearly both student and family placed a higher value on the educational offerings of these institutions and were willing to sacrifice past, current, or future expenditures to meet these increased costs. This trend was consistent over all income groups. However, as enrollment data indicate, smaller relative numbers of students and/or families have been able to meet the costs of private education in recent years.

Thus, in spite of the fact that substantial differences persist between net prices at higher and lower family income levels and among higher and lower cost institutions, it is nonetheless apparent from these data that grant aid programs available for the 1973-74 academic year have been reasonably successful in equalizing net price to students currently enrolled regardless of income up to the income level of $12,000 in schools of similar costs. It is also true that grants (and the family contribution) are a function of costs as they increase with student costs although decreasing with income.

It should again be pointed out that these data are for young people who actually chose to enter postsecondary education. Therefore, we cannot say with any degree of certainty that the net prices faced by all potential postsecondary education entrants were as close to being equalized as these data suggest. Those who choose not to attend may have so decided because they found net prices markedly higher than those who decided to attend.

The data in Table 8 on the consistency of net price across income categories also suggest that factors other than financial constraints contribute to differences in postsecondary participation rates among income classes. Thus, given the aid programs subsequently available in FY 1975 and FY 1976 to most lower income students, it seems clear that the problem of accessing postsecondary education may not be purely financial, and in fact an argument can be made that non-financial barriers may be more important. What the problem is (if, indeed, there is a problem) is a matter of debate.

F. The Relationship of Direct Aid to Persistence in PSE

A question of major importance is: to what extent do students receiving direct aid withdraw, compared to those without aid? Peng and Fetters, in a

companion paper with this one,[7/] included presence or absence of scholarships and/or loans in their study of persisters vs. withdrawers in two- and four-year colleges, as evidenced by the reports of activity of NLS respondents in the fall of 1974 who were in these kinds of institutions in the fall of 1972. After controlling for other factors such as ability levels and race, they conclude that "the relationships between financial aid and withdrawal were almost neglible; financial aid recipients, even those who were scholarship recipients, were not more persistent than non-recipients."

G. Needs for Further Study

The descriptive analyses presented here only skim the surface for useful analyses with the NLS data base on the effect of aid on PSE entry and persistence. The data show that for enrolled students the consuming of aid is inversely related to level of family income, and that an impact of aid is the equalization of net price through progressively higher family contributions and progressively lower amounts of aid as family income increases. Of particular importance yet is the question as to the effect of the availability of aid, or the amount of aid potentially available, in the initial decision to go or not to go to college, or to open choice to schools outside a particular cost or net price range.

In closing note should be taken of two rather extensive studies involving NLS data now underway. One is being conducted by Stephen P. Dresch, of the Institute for Demographic and Economic Studies in New Haven, Connecticut, that is concerned with the consequences of labor market conditions and financial aid availability for educational decisions of young people. Another, by Gregory A. Jackson, of the Harvard Graduate School of Education, attempts to estimate how Federal student aid programs might have affected college enrollments. Both efforts have been in part funded by the Office of Education. In both instances study results are expected to be available by mid-year (1977).

Finally: we should note that the data presented in this paper provide estimates on those high school seniors coming available for entry into PSE in the fall of 1972, a very particular point in time with regard to aid available as well as to employment options or perceptions of the value of a college education (which may change over time). The replication of the NLS, an active priority of the National Center for Education Statistics, should provide more definitive data in this regard.

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7/ Peng, S. S., and Fetters, W. B. College Student Withdrawal: A Motivational Problem. AERA Paper, 1977.

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